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NOTICE OF ALLOWANCE AND FEE(S) DUE

38106 7590 07/09/2010

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVENUE, SUITE 5400
SEATTLE, WA 98104-7092

EXAMINER

DEBNATH, SUMAN

ART UNIT

PAPER NUMBER

2435

DATE MAILED: 07/09/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,782

11/10/2003

Andrew Dellow

851963.414

4386

TITLE OF INVENTION: SECURITY INTEGRATED CIRCUIT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/12/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

38106 7590 07/09/2010

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,782	11/10/2003	Andrew Dellow	851963.414	4386

TITLE OF INVENTION: SECURITY INTEGRATED CIRCUIT

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	10/12/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
DEBNATH, SUMAN	2435	713-163000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/705,782	11/10/2003	Andrew Dellow	851963.414	4386
38106	7590	07/09/2010	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 5400 SEATTLE, WA 98104-7092			DEBNATH, SUMAN	
			ART UNIT	PAPER NUMBER
			2435	
DATE MAILED: 07/09/2010				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 535 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 535 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/705,782	DELLOW ET AL.	
	Examiner	Art Unit	
	SUMAN DEBNATH	2435	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication filed on May 18, 2010.
2. ☒ The allowed claim(s) is/are 1-7,9-19,21 and 22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other ____. |
|--|--|

DETAILED ACTION

1. Claims 1-7, 9-19 and 21-22 are pending in this application.

Allowable Subject Matter

2. The following is an Examiner's statement of reasons for allowance: Claims 1-7, 9-19 and 21-22 are allowed.

3. The Examiner had found that the prior art of record does not teach or suggest or render obvious: "an input interface structured to receive the encrypted broadcast signals, a-to receive broadcast encrypted common keys, and to receive encrypted broadcast control data having encrypted control signals, and an output interface for output of decrypted broadcast signals; a processing unit arranged to receive the encrypted broadcast signals via the input interface, to decrypt the encrypted broadcast signals in accordance with decrypted control signals, and to provide decrypted broadcast signals to the output interface; a first decryption circuit arranged to receive encrypted control signals from the input interfaced-and to decrypt the control signals in accordance with a decrypted common key from a dedicated common key store in the integrated circuit, and to output the decrypted control signals to the processing unit. the common key store structured to store a plurality of decrypted common keys in association with a respective identifier corresponding to each broadcast signal; and a second decryption circuit arranged to receive the common key in encrypted form from the input interface and to decrypt the common key in accordance with a secret key from

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a secret key store in the integrated circuit and to store the decrypted common key in the decrypted common key store, the secret key being unique to the monolithic circuit and being not accessible from outside the monolithic circuit; the monolithic structured so that the only route to placing a common key in the common key store is to receive by broadcast the common key in encrypted form for decryption in accordance with the secret key and provide the common key to the common key store over an internal bus, the common key store receiving and storing a plurality of decrypted common keys that provide different levels of access to the broadcast signals and the only route to providing the control signals to the processing unit is to input them in encrypted form for decryption in accordance with the common key” as in claim 1.

4. The prior art of record does not teach or suggest or render obvious: “a transmitter arranged to broadcast: signals encrypted according to control words; control words encrypted according to a common key common to two or more authorized recipients; and common keys encrypted respectively according to a unique secret key of each authorized recipient, each of the common keys associated with tile respective encrypted broadcast signals with a respective identifier; the system further comprising a plurality of receivers, each receiver comprising a semiconductor integrated circuit, wherein the secret key is unique to each semiconductor integrated circuit, the semiconductor integrated circuit comprising: an input interface structured to receive the encrypted broadcast signals, a broadcast encrypted common-key keys, and broadcast control data with encrypted control signals, and an output interface for output of decrypted broadcast

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signals; a processing unit structured to receive the encrypted broadcast signals via the input interface, to decrypt the encrypted broadcast signals in accordance with control signals, and to provide decrypted broadcast signals to the output interface; a first decryption circuit arranged to receive the encrypted control signals from the input interface and to decrypt the control signals in accordance with a respective decrypted common key and identifier from a dedicated common key store in the integrated circuit that stores a plurality of decrypted common keys and associated identifiers; and a second decryption circuit arranged to receive the common keys in encrypted form from the input interface and to decrypt the common keys in accordance with a secret key from a secret key store in the integrated circuit and to store each decrypted common key in the decrypted common key store with a respective identifier; whereby the circuit is arranged such that the only route to placing a common key in the common key store is to receive by broadcast the common key in encrypted form for decryption in accordance with the secret key and provide the common key to the common key store over an internal bus, and the only route to providing the control signals to the processing unit is to input them in encrypted form for decryption in accordance with the common key” as in claim 9.

5. The prior art of record does not teach or suggest or render obvious: “a common key store in the monolithic device and configured to receive a decrypted common key and a respective identifier that is associated with a respective broadcast signal; a secret key store in the monolithic device configured to store a secret key that is unique to the

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monolithic device; a decryption unit comprising a first decryption circuit configured to receive encrypted broadcast control signals and to decrypt the control signals in accordance with a respective common key from the common key store, and a second decryption circuit configured to receive the broadcast common key in encrypted form and to decrypt the common key in accordance with a secret key from the secret key store and to store the decrypted common key in the common key store with the respective identifier that associates the decrypted common key with the respective broadcast signal; and a processing unit configured to receive encrypted broadcast signals and decrypt the encrypted broadcast signals in accordance with the decrypted control signals received from the decryption unit and to provide decrypted broadcast signals to an output interface; whereby the device is arranged such that the only route to placing a common key in the common key store is to input the common key in encrypted form for decryption in accordance with the secret key and provide the common key to the common key store over an internal bus, and the only route to providing the control signals to the processing unit is to input them in encrypted form for decryption in accordance with the common key” as in claim 10.

6. The prior art of record does not teach or suggest or render obvious: “receiving encrypted broadcast signals, encrypted broadcast control signals for the respective broadcast signals, and encrypted broadcast common key signals at an input interface of a decryption unit formed on a monolithic semiconductor integrated circuit, the semiconductor integrated circuit comprising a common key store, a secret key store,

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and a processing unit; decrypting the encrypted broadcast common keys utilizing a stored secret key in the secret key store in the semiconductor integrated circuit to generate a-decrypted common he-y. keys and program identifier that associates each common key with the respective broadcast signal and that provides different levels of access to the broadcast signals through the common keys; storing the decrypted common keys in the common key store in the semiconductor integrated circuit with the respective identifiers in a table format; decrypting the encrypted control signals with respective broadcast signals with the respective common key to generate decrypted control signals; providing the decrypted control signals to the processing unit; and decrypting the encrypted broadcast signals using the processing unit in accordance with the decrypted control signals and providing decrypted broadcast signals to an output interface of the decryption device; whereby the semiconductor integrated circuit is arranged such that the only route to placing the decrypted common keys in the common key store is to receive by broadcast the common keys in encrypted form for decryption in accordance with the secret key and provide the decrypted common keys to the common key store over an internal bus, and the only route to providing the control signals to the processing unit is to input them in encrypted form for decryption in accordance with the respective common key” as in claim 13.

7. The prior art of record does not teach or suggest or render obvious: “encrypting control words associated with the broadcast signals and broadcasting the encrypted control words; encrypting a-common keys associated with the broadcast signals by

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program identifiers and broadcasting the encrypted common keys encrypting broadcast signals and broadcasting the encrypted broadcast signals to the plurality of subscribers; providing a secret key to each authorized recipient that is stored in a secret key store on a monolithic semiconductor integrated circuit in a respective decryption unit; receiving encrypted broadcast signals, encrypted broadcast control signals for the respective broadcast signals, and encrypted broadcast common key signals at an input interface of a decryption unit formed on the monolithic semiconductor integrated circuit, the semiconductor integrated circuit comprising a common key store, a secret key store, and a processing unit; decrypting the encrypted common keys utilizing a stored secret key to generate a-decrypted common keys and program identifier that associates each common key with the respective broadcast signals storing the decrypted common keys in a dedicated common key store on the monolithic semiconductor integrated circuit

With the respective identifiers in a table format; decrypting the encrypted control .signals for respective broadcast signals with the respective decrypted common key to generate decrypted control signals; providing the decrypted control signals to the processing unit; and decrypting the encrypted broadcast signals using the processing unit in accordance with the decrypted control signals and providing decrypted broadcast signals to an output interface of the decryption device; whereby the semiconductor integrated circuit is arranged such that the only route to placing a common key in the common keys store is to receive by broadcast the common keys in encrypted form for decryption in accordance with the secret key and provide the common keys to the common key store over an internal bus, and the only route to providing the control signals to the

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processing unit is to receive by broadcast them in encrypted form for decryption in accordance with the respective common key” as in claim 16.

8. The prior art of record does not teach or suggest or render obvious: “a transmitter configured to broadcast signals encrypted according to control words, to broadcast control words encrypted according to a common key that is common to two or more authorized recipients, and to broadcast the common key encrypted according to a secret key that is unique to each authorized recipient, the system configured to change the encrypted common keys at a rate that is greater than once per hour; and a plurality of receivers configured to receive the broadcast signals, each receiver comprising: a common key store formed on a single monolithic semiconductor integrated circuit and configured to receive the broadcasted common key and a respective identifier that is associated with a respective broadcast signal; a secret key store formed on the single monolithic semiconductor integrated circuit and configured to store a secret key that is unique to the monolithic device; a decryption unit formed on the single monolithic semiconductor integrated circuit and comprising a first decryption circuit configured to receive the broadcasted encrypted control signals and to decrypt the encrypted control signals in accordance with a respective common key from the common key store, and a second decryption circuit configured to receive the broadcasted common key in encrypted form and to decrypt the encrypted common key in accordance with a secret key from the secret key store and to store the common key in the common key store with the respective identifier that associates the decrypted common key with the

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respective broadcast signals; a processing unit formed on the single monolithic semiconductor integrated circuit and configured to receive encrypted broadcast signals and decrypt the encrypted broadcast signals in accordance with the decrypted control signals received from the decryption unit and to provide decrypted broadcast signals to an output interface; whereby the system is arranged such that the only route to placing a common key in the common key store is to receive by broadcast the common key in encrypted form for decryption in accordance with the secret key and provide the decrypted common key to the common key store over an internal bus, and the only route to providing the control signals to the processing unit is to receive them by broadcast in encrypted form for decryption in accordance with the common key” as in claim 19.

9. Any comments considered necessary by the Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUMAN DEBNATH whose telephone number is (571)270-1256. The examiner can normally be reached on 8 am to 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. D./

Examiner, Art Unit 2435

/Kimyen Vu/

Supervisory Patent Examiner, Art Unit 2435